

We claim:

1. A method of delivering a fluid F which contains at least one
5 (meth)acrylic monomer by means of a delivery pump comprising
 - a) a pump cavity,
 - b) a drive compartment and
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 - c) a separator compartment which separates the pump cavity
and the drive compartment
- and where
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 - the pump cavity contains at least one delivery element
for delivering the fluid F;
 - the fluid F is fed to the pump cavity with an input
20 energy;
 - the fluid F leaves the pump cavity with an output energy
which exceeds the input energy;
 - 25 - a shaft driven in the drive compartment is run out from
the drive compartment through the separator compartment
into the pump cavity;
 - the at least one delivery element contained in the pump
30 cavity is linked in such a way to the driveshaft run into
the pump cavity that the driveshaft can transmit a torque
to the delivery element;
 - the separator compartment is filled with a barrier medium
35 which comprises a barrier gas and/or a barrier liquid and
differs from the fluid F; and
 - the driveshaft is not supported within the pump cavity,
 - 40 wherein

the pressure of the barrier medium exceeds the pressure in the pump cavity and the pressure in the drive compartment, and

- 5 that section of the driveshaft which runs through the separator compartment is fitted, both toward the pump cavity and toward the drive compartment, with sliding elements which are permanently and impermeably attached to the driveshaft and sealingly slide on the separator compartment inner walls
10 through which the driveshaft passes.
2. A method as claimed in claim 1, wherein the delivery pump is a centrifugal pump or a side channel pump.
- 15 3. A method as claimed in claim 1 or 2, wherein the barrier medium used is a mixture of ethylene glycol and water.
4. A method as claimed in claim 1 or 2, wherein the barrier medium used is an oxygen-containing gas.
- 20 5. A method as claimed in claim 3, wherein the separator compartment loses from 0.2 to 0.5 ml/h of barrier medium.
- 25 6. A method as claimed in claim 4, wherein the separator compartment loses from 120 to 150 Nml/h of barrier medium.
7. A method as claimed in claim 3, wherein the barrier medium comprises from 30 to 40 wt% of ethylene glycol.
- 30 8. A method as claimed in claim 4, wherein the barrier medium comprises from 4 to 21 vol% of oxygen.
9. A method as claimed in any one of claims 1 to 8, wherein the sliding element is made of SiC.
- 35 10. A method as claimed in any one of claims 1 to 9, wherein the fluid is a (meth)acrylic acid which contains ≥ 95 wt% of (meth)acrylic acid.